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PTO/SB/16 (12-97)
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Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (c).

INVENTOR(S)		
Given Name (first and middle [if any])	Family Name or Surname	Residence (City and either State or Foreign Country)
Angela	Masson	Miami Beach, FL

[ ] *Additional inventors are being named on the ___ separately numbered sheets attached hereto*

TITLE OF THE INVENTION (280 characters max)

Electronic Kit Bag

Direct all correspondence to: **CORRESPONDENCE ADDRESS**

[X] Customer Number 20822 → *Place Customer Number Bar Code Label here*

OR *Type Customer Number here*

[X] Firm *or* Individual Name	Robert M. Schwartz, P.A.				
Address	169 E. Flagler Street				
Address	Suite 1125				
City	Miami	State	FL	ZIP	33131-1205
Country	USA	Telephone	305-373-7600	Fax	305-373-7607

ENCLOSED APPLICATION PARTS *(check all that apply)*

[X] Specification *Number of Pages* 17 [X] Small Entity Statement

[X] Drawing(s) *Number of Sheets* 7 [ ] Other (specify)

METHOD OF PAYMENT OF FILING FEES FOR THIS PROVISIONAL APPLICATION FOR PATENT *(check one)*

[X] A check or money order is enclosed to cover the filing fees — FILING FEE AMOUNT ($): 75.00

[X] The Commissioner is hereby authorized to charge filing fees or credit any overpayment to Deposit Account Number: 19-0734

The invention was made by an agency of the United States Government or under a contract with an agency of the United States Government.

[X] No.

[ ] Yes, the name of the U.S. Government agency and the Government contract number are: _____

Respectfully submitted,

SIGNATURE _____ Date 11/5/99

TYPED or PRINTED NAME Robert M. Schwartz REGISTRATION NO. *(if appropriate)* 29,854

TELEPHONE 305-373-7600 Docket Number: 99270

USE ONLY FOR FILING A PROVISIONAL APPLICATION FOR PATENT

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Box Provisional Application, Assistant Commissioner for Patents, Washington, DC 20231.

22222 U.S. PTO 10/30/00
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PTO/SB/17 (6/99)
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FEE TRANSMITTAL for FY 1999

Patent fees are subject to annual revision.
Small Entity payments must be supported by a small entity statement, otherwise large entity fees must be paid. See Forms PTO/SB/09-12. See 37 C.F.R. §§ 1.27 and 1.28.

TOTAL AMOUNT OF PAYMENT ($) 75.00

Complete if Known	
Application Number	
Filing Date	
First Named Inventor	Masson, Angela
Examiner Name	
Group / Art Unit	
Attorney Docket No.	99270

METHOD OF PAYMENT (check one)

1. ☐ The Commissioner is hereby authorized to charge indicated fees and credit any over payments to:

Deposit Account Number: 19-0734

Deposit Account Name: Robert M. Schwartz

☒ Charge Any Additional Fee Required Under 37 CFR §§ 1.16 and 1.17

2. ☒ **Payment Enclosed:**
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FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
101	760	201	380	Utility filing fee	
106	310	206	155	Design filing fee	
107	480	207	240	Plant filing fee	
108	760	208	380	Reissue filing fee	
114	150	214	75	Provisional filing fee	75.00

SUBTOTAL (1) ($) 75.00

2. EXTRA CLAIM FEES

	Extra Claims		Fee from below		Fee Paid
Total Claims		-20** =		X	=
Independent Claims		- 3** =		X	=
Multiple Dependent					=

**or number previously paid, if greater; For Reissues, see below

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	78	202	39	Independent claims in excess of 3
104	260	204	130	Multiple dependent claim, if not paid
109	78	209	39	** Reissue independent claims over original patent
110	18	210	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($)

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee or oath	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	
116	380	216	190	Extension for reply within second month	
117	870	217	435	Extension for reply within third month	
118	1,360	218	680	Extension for reply within fourth month	
128	1,850	228	925	Extension for reply within fifth month	
119	300	219	150	Notice of Appeal	
120	300	220	150	Filing a brief in support of an appeal	
121	260	221	130	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a public use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,210	241	605	Petition to revive - unintentional	
142	1,210	242	605	Utility issue fee (or reissue)	
143	430	243	215	Design issue fee	
144	580	244	290	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Petitions related to provisional applications	
126	240	126	240	Submission of Information Disclosure Stmt	
581	40	581	40	Recording each patent assignment per property (times number of properties)	
146	760	246	380	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	760	249	380	For each additional invention to be examined (37 CFR § 1.129(b))	

Other fee (specify) _____

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid **SUBTOTAL (3)** ($)

SUBMITTED BY

Complete *(if applicable)*

Name (Print/Type)	Robert M. Schwartz	Registration No. (Attorney/Agent)	29,854	Telephone	305-373-7600
Signature				Date	11/5/99

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

November 5, 1999

Box Provisional Patent Application
Assistant Commissioner for
Patents
Washington, D.C. 20231

COVER SHEET

Re: New United States Provisional Patent Application
Title: Electronic Kit Bag
Inventor: Angela Masson
Our File No.: 99270

Sir:

Enclosed are the following documents for filing:

[X] Provisional Application For Patent Cover Sheet - 1 page.
[X] Fee Transmittal - 1 page.
[X] Provisional Application - 17 pages.
[X] Drawings - 7 sheets.
[X] Small Entity Statement/Independent Inventor - 1 page.
[X] Check No. 8935 in the amount of $75.00 in payment of the filing fee.
[X] Return postcard indicating your receipt of the above-captioned documentation.

"Express Mail" mailing label number EL537108698US
Date of Deposit November 5, 1999

I hereby certify that this paper or fee is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 CFR 1.10 on the date indicated above and is addressed to Box Provisional Patent Application, Assistant Commissioner for Patents, Washington, D.C. 20231.

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(Typed or printed name of person mailing paper or fee)

Sonia K. Kuster
(Signature of person mailing paper or fee)

11/5/99
(Date of signature)

LAW OFFICES OF ROBERT M. SCHWARTZ, P.A., 169 EAST FLAGLER STREET, SUITE 1122, MIAMI, FL 33131-1205, TELEPHONE 305-373-7600, (FAX) 305-373-7607

These documents enclosed and referenced herein are being submitted under the "Express Mail" filing provisions, 37 CFR 1.10, and a filing date corresponding to the date of deposit is respectfully requested.

Very truly yours,

ROBERT M. SCHWARTZ
Registered Patent Attorney
Reg. No. 29,854

RMS/sk
Enclosures

EXPRESS MAIL NO. EL 645 930 305 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PROVISIONAL PATENT APPLICATION

Title: Electronic Kit Bag

Inventor: Angela Masson

SUMMARY OF THE INVENTION

This invention relates in general to computers, and in particular to the processing and translating of transportation data and functions though linear and non-linear methodologies into active operating parameters.

BACKGROUND OF THE INVENTION

The historical development of this invention, the EKB, can be examined from three general perspectives: 1) weight, 2) utility and 3) function.

1) Kit bag weight: Pilots, and other transportation professionals, routinely carry extremely heavy bags, full of paraphernalia specific to their art, including maps, calculators, logs, charts, navigation instruments, and so on. This bag is usually referred to as a "kit bag" and generally, for an aviation professional, for example, weighs between 30 and 80 pounds. According to FAA Medical and Workman's Compensation statistics, the most common loss of work time, on the job injuries, in this work group are related to moving, carrying and stowing the "kit bag": torn

shoulder ligaments, dislocated elbows, "slipped disk" back problems, and knee joints.

The problem of the heavy kit bag/injured pilot has been attempted to be solved by at least one other means, adding wheels and a handle to the kit bag, roller-suitcase style.

The following invention was originally conceived with the intention of simply solving the weight problem, as the entire contents of a traditional kit bag can be reduced to an electronic equivalent of about 3-7 lbs. However, in developing the project, other innovative and highly functional properties became apparent.

2) Utility: The current kit bag can be compared to a cumbersome sideways drawer. An area is generally left in the cockpit, to the right or left of the pilot, where the kit bag can be placed. In flight, if an item is needed from the kit bag, there often ensues an unpacking, rummaging and hunting expedition into the kit bag for the sought after manual, tool, chart, log or other desired item. The pilot is taken out of the flying-loop while this hunting expedition is in progress. Another draw-back of the old-fashioned kit bag is the traditional coffee-spill. Coffee-cup holders in the cockpit are generally placed right above the kit back stowage compartment. A kit bag is not

considered "broken in" until at least one cup of coffee, orange juice or other non-paper friendly liquid has spilled into the contents of the kit bag and ruined the most important documents needed for the flight in progress, as well as any other important paperwork contained therein.

Further, the traditional kit bag must be hauled around like an additional suitcase. It is here that most on-the-job injuries occur: removing the kitbag from the too tight storage area, heaving it into overhead bins, lifting it in and out of vans and storage facilities.

The utility problem has heretofore not been successfully addressed. Although traditionally kit bags are made in various shapes and from various sorts of materials (including tin, plastic-covered card-board, canvas, etc.), they all only serve to hold contents in a standard method with the result being bulky, cumbersome and heavy.

The EKB approaches the problem from another perspective. By changing the nature of the *contents* of the kit bag, the nature of the exterior of the "bag" is also modified. The E6-B slide rule is a device, for instance, which can eliminate some wind charts and solve some airspeed/ground speed calculations. Its predecessor, the handheld calculator, designed for the same functions, was an electronic advancement, as is the Performance Management

System, an integrated on-board aircraft system. Although these devices may individually partially contribute to certain aspects of a kit bags contents and function (see #3 following), none address the concept of deleting the load or form of the kit bag in any way, let alone the entirety all functional aspects of a kit bag. The EKB is light weight and easily manipulated. It can be moved without undue stress, strain or physical contortion. In use, it will not be below the coffee holders! Less physical storage place is needed, resulting in more cockpit room. Also, less weight is carried on-board, resulting in substantial and measurable fuel savings.

3) Function: As mentioned, with the traditional kitbag, the pilot must rummage through the contents in search of the needed material(s), taking the pilot out the immediate operating loop, and costing precious time, especially in an emergency. Often needed particulars are located in separate and disparate areas. The pilot may need to consult one manual for operating parameters, another book of charts for an off-line emergency airport, another manual for the emergency procedure, while simultaneously taking with dispatch or operations on a radio. The other pilot [in generally two-person airline crews] is left alone to fly a possibly crippled airplane, talk to the flight attendants

and passengers, and negotiate with air-traffic control.

Few attempts have been made to alleviate the duress caused by this plethora of unrelated information presented in physically unrelated forms. One limited suggestion known to this inventor was an on-board type computer which used an aircraft up-link device to managed charts. This failed FAA certification, however, partly because it relied on aircraft power. The EKB, while providing much more information as well as information processing, relies on internal battery power (although it can be "charged" from aircraft power as well). The FAA has provided, incidentally, provisional operating permission for use of the EKB on-board.

The EKB requires learning only simple key-stroke patterns to be a superior replacement for the traditional kit bag and contents in many operating situations. Optimal functionality is acquired when all mentioned inputs are interfaced and electronically "evaluated." Several steps can be incorporated in one or a few input strokes from a proficient operator.

Additionally, the EKB has the potential capability to actually "fly" the aircraft within certain parameters to a touch-down and landing.

A major improvement over the traditional "kit bag" is that the computerized version can manipulate data in a non-

linear algorithm, aggregating and sorting choices, thereby aiding in decision-making processes resulting in solutions to mathematical computations, runway selection, operating parameters, figuring pilot fatigue limits and scheduling issues. Output solutions can be interfaced with the craft, auto-pilot style, so that a craft could be manipulated through the EKB via radio/satellite/other mode transmissions by a ground operator in certain emergencies, such as crew incapacitation.

OBJECTIVES

It is the principal object of the current invention to create a device which, through the amalgamation and formalization of disparate operating data into a functional methodology that can then can be translated quickly and easily into today's operating environment, will not only make a pilot's overburdened job easier, but could save lives.

RELATED ART

In order to provide background information so that the invention may be completely understood and appreciated in its proper context, reference is made to a number of prior art patents and publications as follows:

computers

calculating devices

radios

printers

autopilots

radio-controlled aircraft/missiles

Whatever the precise merits, features and advantages of the above cited references, none of them achieves or fulfills the purposes of the present invention.

SUMMARY OF THE INVENTION

Other than through exterior suit-case like changes, organizing the contents of the standard pilot kit bag into a more manageable, user/friendly format has not been attempted. Coalescing and analyzing kit bag data electronically is a modern and sensible solution to the both the problems of physical ungainliness and practical application of the standard kit bag. Additionally, the problem of aircraft control during pilot incapacitation has also been inadequately addressed by any means other than self-help (oxygen use) or on-board autopilot capabilities. Heretofore there has been no device which offers a simultaneous, practical and coherent solution for either problem. The electronic, computerized portable kit bag

(EKB), offers solutions to both problems in a single package.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 The Basic EKB, sample solution and construction, exterior view.

Fig. 2 All-in one interactive headgear, sample interface, user friendly output data acquisition.

Fig. 3 Additional ergonomic design, EKB alternative construction, exterior view.

Fig. 4 Current standard, internal data processing flow diagram.

Fig. 5 Improvement # 1, internal data processing flow diagram.

Fig. 6 Improvement #2, internal data processing flow diagram.

Fig. 7 Potential application, input-EKB-output processing sample.

DETAILED DESCRIPTION OF THE INVENTION

The portable, computerized electronic kit bag (EKB) consists of standard and state-of-the-art computer parts and peripherals, interfaced for maximum utility. The EKB can be constructed similarly for several end user-operators,

including captains, pilots, commanders, drivers, dispatchers and operations personnel of boats/ships, automobiles, aircraft, spacecraft and other transportation devices. The example used here will apply to the pilot of an airliner.

The computer itself is a laptop type, or ergonomic variation thereof, such as a knee-top style (Fig.3). Enhancements include a translucent secondary window designed for the purpose of overlaying "heads-up" display information directly over maps, charts or other data displayed by a primary computer screen. (Fig.1) Peripherals include printers, zip-drives, and other standard or non-standard computer devices. The all-in-one interactive headgear which interfaces with an EKB (Fig. 2), is a sample non-standard peripheral.

Input is acquired online or off-line through modem, cable, direct input, CD, DVD, floppy disk, voice-recognition, infra-red, radio (UHF, VHF), computer linking, video, digitally, scanning or any other accessible and/or compatible means, internet and intranet systems included.

The nature of input data and sources can be typical and/or operationally unusual. This "parent" system is linked with other extant operating systems and data bases, such as reservations, meteorological, dispatch (routing, diversion and alternate planning), load planning,

scheduling, airplane operating parameters, aircraft instruments and related systems (engine, hydraulic, GPS, inertial, radar, GPWS, collision avoidance, etc.), FAA crew rest and duty limits, union regulations and rules, charts/maps, log-books, airport analyses and any and all other links and data that may be made available to computer acquisition.

Input is manipulated internally and integrated through traditional linear, "matrix," or multi-level, cross-access "texotrix" methodology. The central operating program assesses the relationships of input data through a three-dimensional logic based decision-making algorithm. (Fig. 4,5,6), providing the user with up-to-the-minute, operating information available for pre-flight, en route, post flight or future operations. The pilot can access incremental feedback, monitor, or make adjustments at any point. Processing includes recording, coping, filing, updating, organizing, printing, and generating data, literature, schedules, routing, planning, computations and permutations of all phases of the flight needed at any given point in time.

The processing algorithm operates as follows (for example): a unit of data, or calculation, is presented as input (the wind is 240/10) the result can be accessed

immediately, (suggested runway at ORD is 22) or modified by adding another unit of data, or calculation (ice accumulating rapidly) with the result again capable of being accessed, (runway 32 longer, suggested better choice, in spite of wind) or modified (crew legality reaching hourly limit) results available, (runway 27 adequate, quicker access, legal compromise) or modifiable ... (left wing heat becomes inoperative) and so on. See Fig.6 for how the system can "think" and interpolate unrelated data sources.

Processed information is presented as factual output usable to determine operating options: formula calculations to aid in decision-making and suggested "best choice" solutions.

Output solutions can include flight planning, en route decision making moderated by weather and operating factors, financial analyses of integrated choices, fuel computations, weight-and-balance, crew planning, passenger accommodation/satisfaction result prognostication, and statistic relating to associated elements of an on-time/safe flight/travel operation, and so on.

Output can be presented directly or indirectly, electronically, graphically, printed or displayed on the system screen, or through associated systems by way of cable, infra-red, printer, modem, wireless or any other

compatible or available transfer output transfer system.

The EKB data output is formatted to be utilized either directly by the end user, an intermediate user, by a user through an aircraft system, or directly from the device to an aircraft system or autopilot. The EKB includes the capability of being interfaced directly with the aircraft, auto-pilot style, through "hard-wired" cable (by plugging a unit connector cable directly into the autopilot or specific system computer bay), cable-free infrared (for systems so modified to assure compatibility), electronic or other information exchange systems. The process defined by the transmittal of data from a ground based operator or system, through an on-board combined-functions device, resulting in the manipulation or active control of an operating transportation craft can be established in the following manner: the EKB includes receptivity to input in the form of voice activated commands or electronic data transfer, and can output directly to aircraft control systems. Thus, functional radio control of the aircraft can be established from ground based personnel or equipment in emergency situations, such as pilot incapacitation.

The pilot receives information from flight operations regarding a flight plan which includes departure point, destination, alternate airports, and fuel time. The pilot

then reviews and uses that information; Then the pilot acquires a weather briefing. Then that information is used by the pilot; Then the pilot acquires, referring to #3 and said figure 4, information about cruise scheduling and other limitations regarding the time the crew has been on duty for this particular mission. Additionally, the pilot acquires maintenance information about the plane from the log book on the airplane from pilot briefings and/or from the mechanics. Additionally, the pilot acquires load information about weight and balance in reference to this particular flight. Additionally information is obtained about passenger concerns, e.g. particular passenger information as well as the passenger manifest and information about the cargo, types of cargo, restricted items, livestock, etc. With this information, as it comes incrementally and linearly to the pilot, the pilot makes modified decisions about the flight.

Referring to fig. 5, improvement No. 1, when the information is acquired by the pilot, as the additional information is given to the pilot, the prior information learned by the pilot is used in supplying the next new information to the pilot. So that, for example, the first linear information received by the pilot would be the flight operations in this example, before the next information is

given to the pilot, the weather information given to the pilot is adjusted based on the flight operation so that the pilot can either access the information directly, e.g., from flight operations, or he can access the weather information so that the flight plan is modified by the influence of the weather information. Likewise, when the third element is added, for example, crew limits, when that information is fed to the pilot, it can modify or suggest a flight plan to be within the limits of the crew. Specifically, this improvement No. 1 ensures that the crew limits will be taken into consideration notwithstanding whether the pilot was thinking about that particular limitation or any of the other limitations or data being fed to him. The program figures the limits based on the flight operations plan in that particular circumstance. For example there are different limits based on whether the flight is domestic or international. Specifically, a crew may only have a certain amount of time left on that leg of the trip which may be shorter than the flight mission which could present a problem to the pilot. This improvement No. 1 takes into consideration the crew limits whether or not the pilot actually considered the same and this way the improvement No.1, flight operations plan is adjusted according to the weather, the crew limits, the maintenance, the load and the

passengers. Another example is for the load. The final weight and load of the plane and passenger quantity under some circumstances is figured out by the pilot especially including variables such as fuel, weather and destination. Under this improvement No. 1 system, for example, if at the time of take off it was starting to rain and it was necessary for the pilot to figure out a new runway length, all these calculations can be done by the computer and assessed in real time as opposed to having the pilot have to research his individual paper manuals as it is presently done for new factors in view of the rain in regards to, for example, take off length, runway length, speed of the airplane under moisture conditions and other adverse conditions. Improvement #1 cumulative adds step by step information, modifying the result mechanically as needed. Referring to Fig. 6, improvement #2 the computer generally returns to the beginning step and reassesses all factors based on all present factors that this system knows, such that the points of analysis made by the system for use by the pilot is re-analyzed with the newest input and output that occurs at any point along the way. In this situation, the pilot can (Option 1) review the information and make a decision, (Option 2) allow the computer to solve some of the questions and base decisions on personal

knowledge and the information provided by the computer, or (Option 3) allow the computer to control and make the decisions. The use of the term =93texotrix=94 [L. *texus*, to weave, seen also in *texture, textile, context* and L. *-trix*, as in *matrix*] is that of the inventor, an array of elements in rows, columns and stacks, treated as a unit using special algebraic laws in facilitating the study of relations between elements, used herein reference to the processing of information in three dimensional levels.

In Summary, the present invention is a portable, computerized, electronic kit bag (EKB) consisting of standard and state-of-the-art computer parts and peripherals, interfaced for maximum utility, a central operating program which assesses the relationships of input data through a three-dimensional logic based decision-making algorithm, an EKB data output formatted to be utilized either directly by the end user, an intermediate user, by a user through an aircraft system, or directly from the device to an aircraft system or autopilot, a process defined by the transmittal of data from a ground based operator or system, through an on-board combined-functions device, resulting in the manipulation or active control of an operating transportation craft, a translucent secondary window designed for the purpose of overlaying "heads-up" display

information directly over maps, charts or other data displayed by a primary computer screen, an all-in-one interactive headgear which interfaces with an EKB, and an ergonomically designed knee-top style EKB.

CLAIMS:

1. A unit, system or systems of device(s), program(s), or hardware interconnected mechanically, electrically, by software, hardware, wireless or other means which collate, inter-relate, systemize, interface, analyze, or otherwise organize/arrange disparate data and function(s) supplied by input device(s) including but not limited to: computers, Internet, web-site, flight instrument(s), engine instrument(s), operating controls, control surfaces, documents, manuals, transportation function(s), software programs, radio, telephonic, wireless, voice commands, ACARS, satellite, video, television, point and click, keyboard, electrical pulse, hydraulic pressure, or any other mechanical or non-mechanical means to produce a resulting output(s) so that a pilot(s), ground-based person(nel), or any operator(s) may access, utilize, manipulate, interlink, interface, connect and/or transfer relevant information, analyses, program(s), and mechanical, hydraulic, electronic, wireless or by other means, one-, two-, three-, or multiple-way control between: (I) ground-based source(s) (computers, operational centers, dispatchers, information sources), and/or (II) portable sources (computers, phones, pagers, navigation device(s)), and/or (III) moving sources (vehicles, autos, trucks, balloons, boats, ships, kites, bicycles, motorcycles, airplanes, jets, rockets, spaceships) for the purposes of navigation, locomotion, transportation, vehicle control, analyses of data, entertainment, testing, simulation, education, emergency/life-saving and or any other use or function.

2. A system which interconnects disparate data so that an operator may interface ground based sources, portable sources and moving sources.

3. A portable, computerized, electronic kit bag (EKB) consisting of standard and state-of-the-art computer part(s) and peripheral(s), interfaced for maximum functional utility in obtaining, organizing, re-organizing and out-putting disparate data.

4. An electronic "kit bag" referring to a specifically designed portable machine for use by a flight or transportation crew member(s) to interface the input/output of all necessary and relevant data.

5. A central operating program or logic system which assesses the relationships of input data through a three dimensional logic based decision-making algorithm.

6. EKB data output formatted to be utilized either directly by the end user, an intermediate user, by a user through an aircraft system, or directly from the device to an aircraft system or autopilot.

7. The process defined by the transmittal of data from (a) ground based operator(s) or system(s) through an on-board combined-functions device, resulting in the manipulation or active control of an operating transportation craft.

8. A translucent secondary window designed for the purpose of overlaying "heads-up" display information directly over maps, charts or other data displayed by a primary computer screen.

9. All-in-one headgear which interfaces with an EKB.

10. Ergonomically designed knee-top style EKB.

11. A three-dimensional algorithm which processes information in a unique, non-linear manner, sorting and assessing disparate data thereby aiding in the decision making process resulting in solutions to problems such as mathematical (load and planning) computations, runway selection, operating parameters, pilot fatigue limits and scheduling issues.

12. That algorithm described as a "texotrix" [inventor's term] whereby initial whole-flight data is outputed in it's most useful form, then as additional data is accumulated, such data is integrated into the whole result, and as additional data is inputed, the program returns to the initial step, reassesses all factors based on all present factors so that the system knows, such that the points of analysis made by the system for use by the pilot is re-analyzed with the newest input and output that occurs at any point along the way. In this situation the pilot can (Option 1) review the information and make a decision, (Option 2) allow the computer to solve some of the questions and base decisions on personal knowledge and the information provided by the computer, or (Option 3) allow the computer to "control" and make the decisions. "Texotrix" refers to that array of elements in rows, columns and stacks, treated as a unit using special algebraic laws in facilitating the study of relations between elements, used here in reference to the processing of information in three dimensional levels.

13. Portable, generated output solutions which can be interfaced with a transportation craft for the purpose of vehicle control (for operation, testing, education, emergency).

14. That device which houses the mechanisms for generating output solutions as described above.

15. The software, or program, which generates the output solutions used to aggregate disparate data for the purposes of planning, aircraft control and related uses as described herein.

16. A portable, electronic device, which may be linked to other devices, used as a "kit bag" by (a) professional pilot(s) for the purpose of simplifying and organizing flight procedures.

17. A portable, electronic device, which may be linked to (a) transportation aircraft for the purpose of controlling or assisting in control of that vehicle(s).

18. A portable, electronic device, which may be linked to other devices, used as a "kit bag" by professional pilot(s) for the purpose of simplifying and organizing flight procedures and may which may also be linked to (the) aircraft for the purpose of controlling or assisting in control of that vehicle(s).

19.. That software which organizes disparate input sources and data for use in the device described in (18) above.

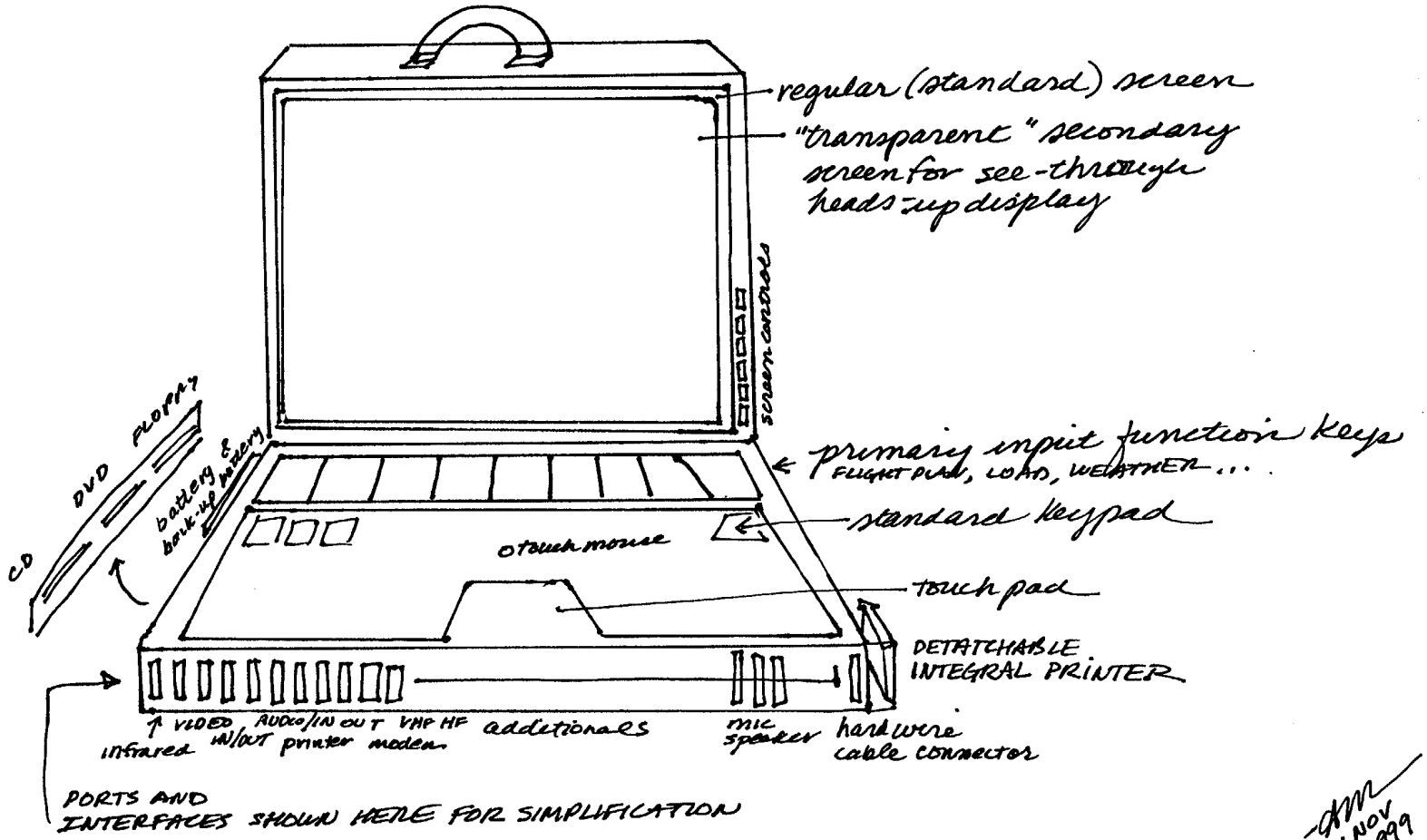
While this invention has been described in reference to illustrative embodiments, this description is not intended to be construed in a limited sense. Various modifications and combinations of the illustrative embodiments, as well as other embodiments of the invention, will be apparent to persons skilled in the art upon reference to the description. It is therefore intended that the appended claims encompass any such modifications or embodiments.

DOCOT "E9666960

Fig 1

BASIC E.K.B.

super
"lap-top plus"



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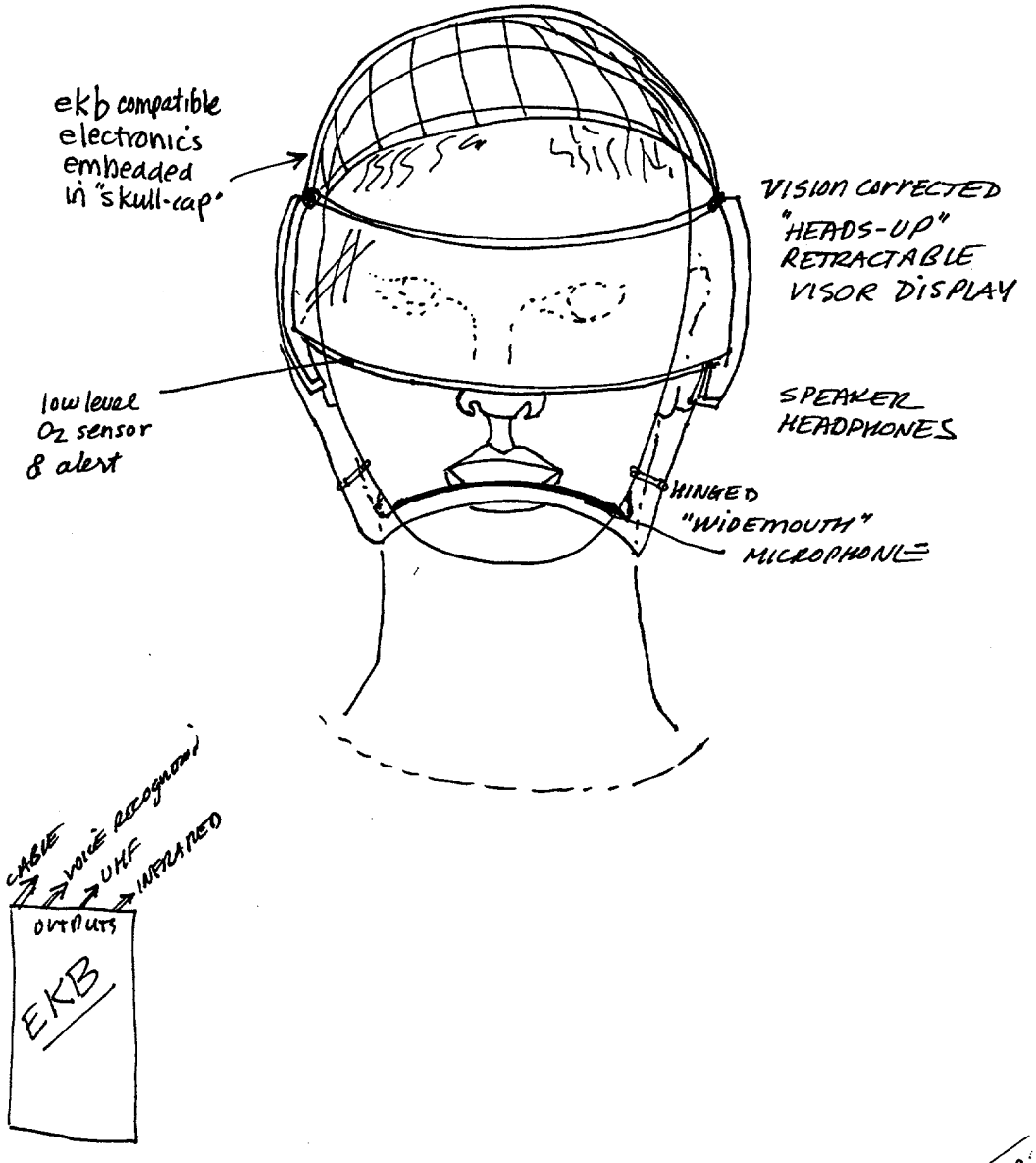
ALL-IN-ONE INTERACTIVE HEADGEAR
EKB INTERFACE

Fig. 2



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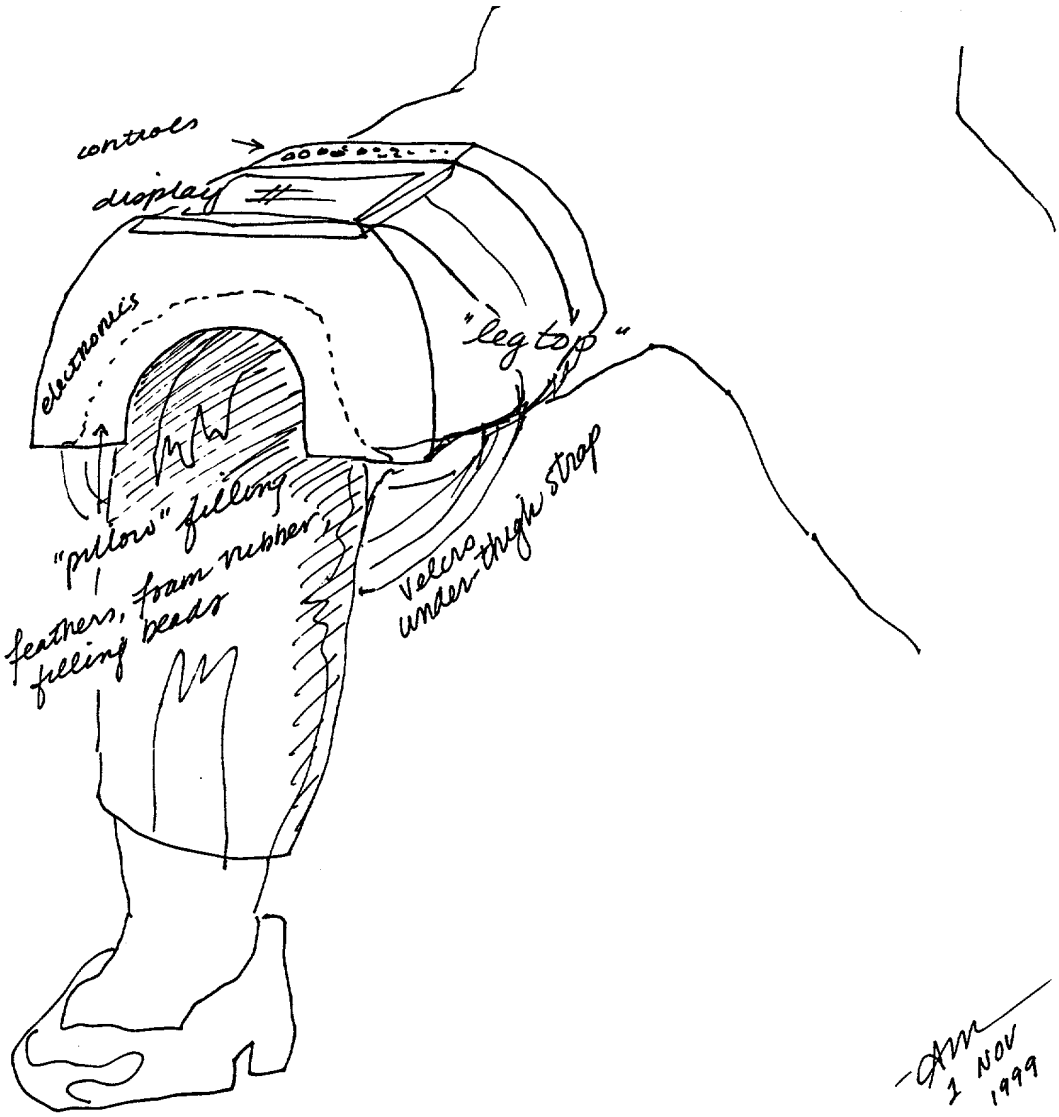
additional
ergonomic design

Fig. 3



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1999

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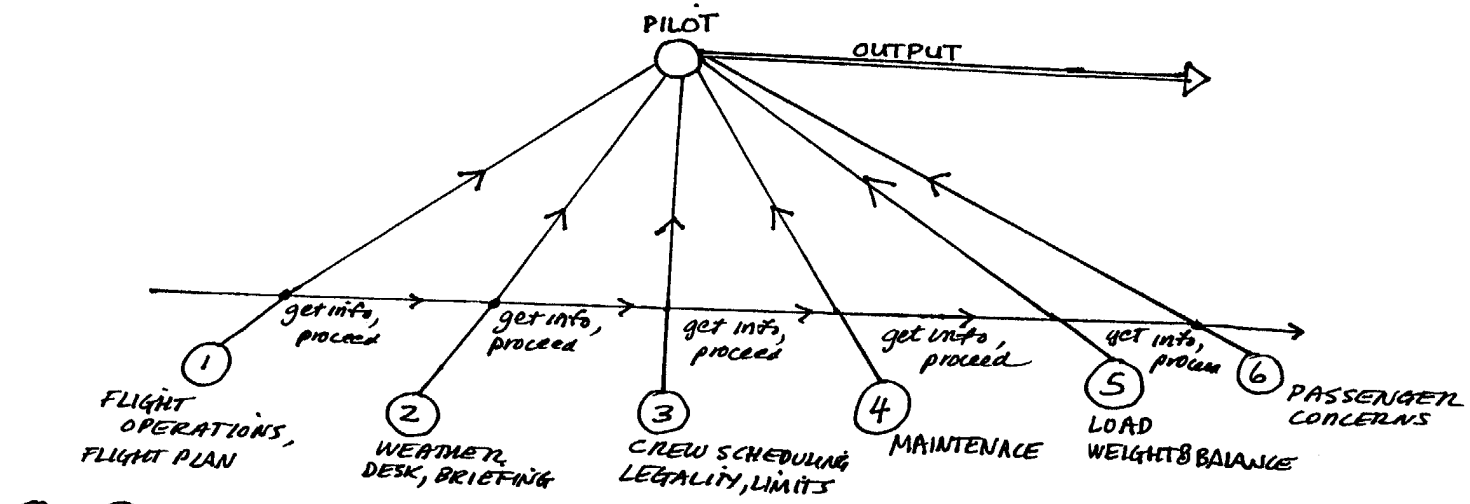
current standard

"computerized, electronic kit bag"

Fig 4



① → ⑥ = INPUT (examples)

LINEAR PROCESSING – ONE DIMENSIONAL

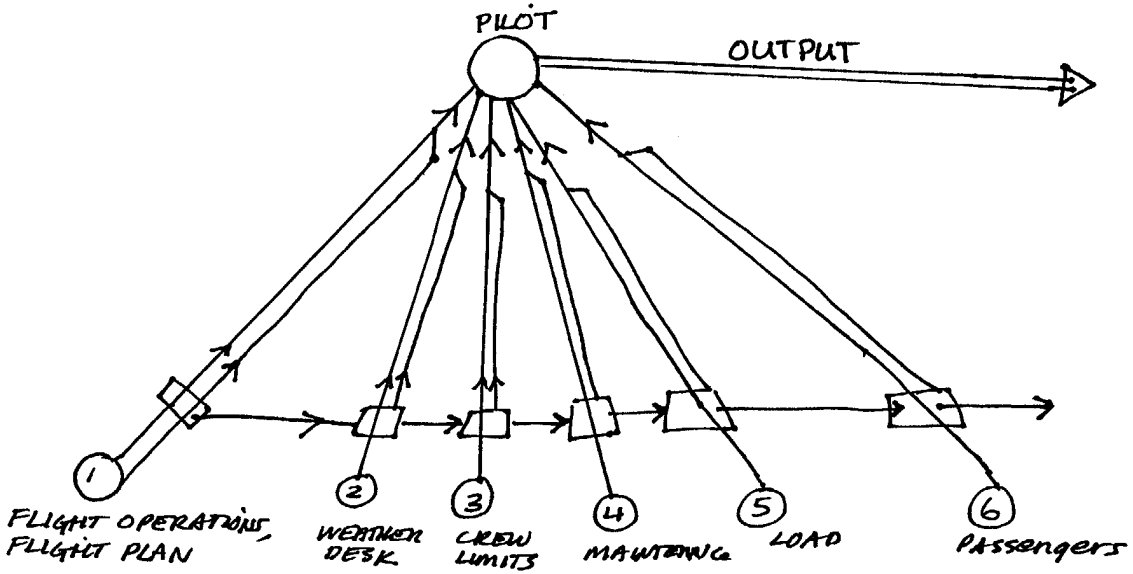
-Ann
NOV 99

DDDEOF' E9666960

improvement #1

"computerized, electronic kitbag"

Fig 5



① → ⑥ = INPUT (examples)

□ = INPUT MODIFIED, ie calculations rendered BY E.K.B. (electronic kitbag)

MATRIX PROCESSING – TWO DIMENSIONAL

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DOCOT E9666960

improvement #2

"computerized, electronic kitbag"

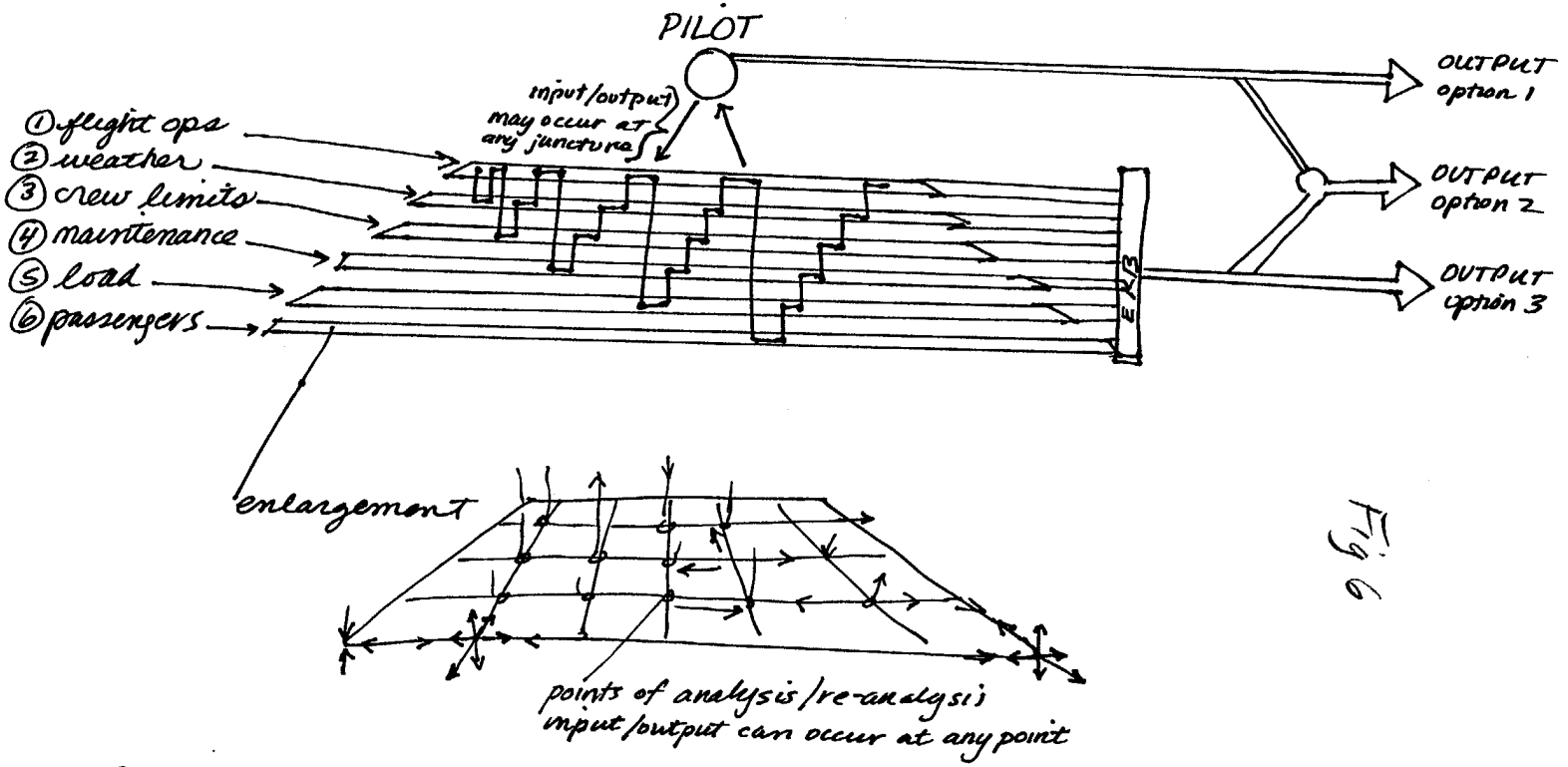

Fig 6

① → ⑥ INPUT (examples)

TEXOTRIX PROCESSING - THREE DIMENSIONAL

DOCOT "E9666960

Potential Application

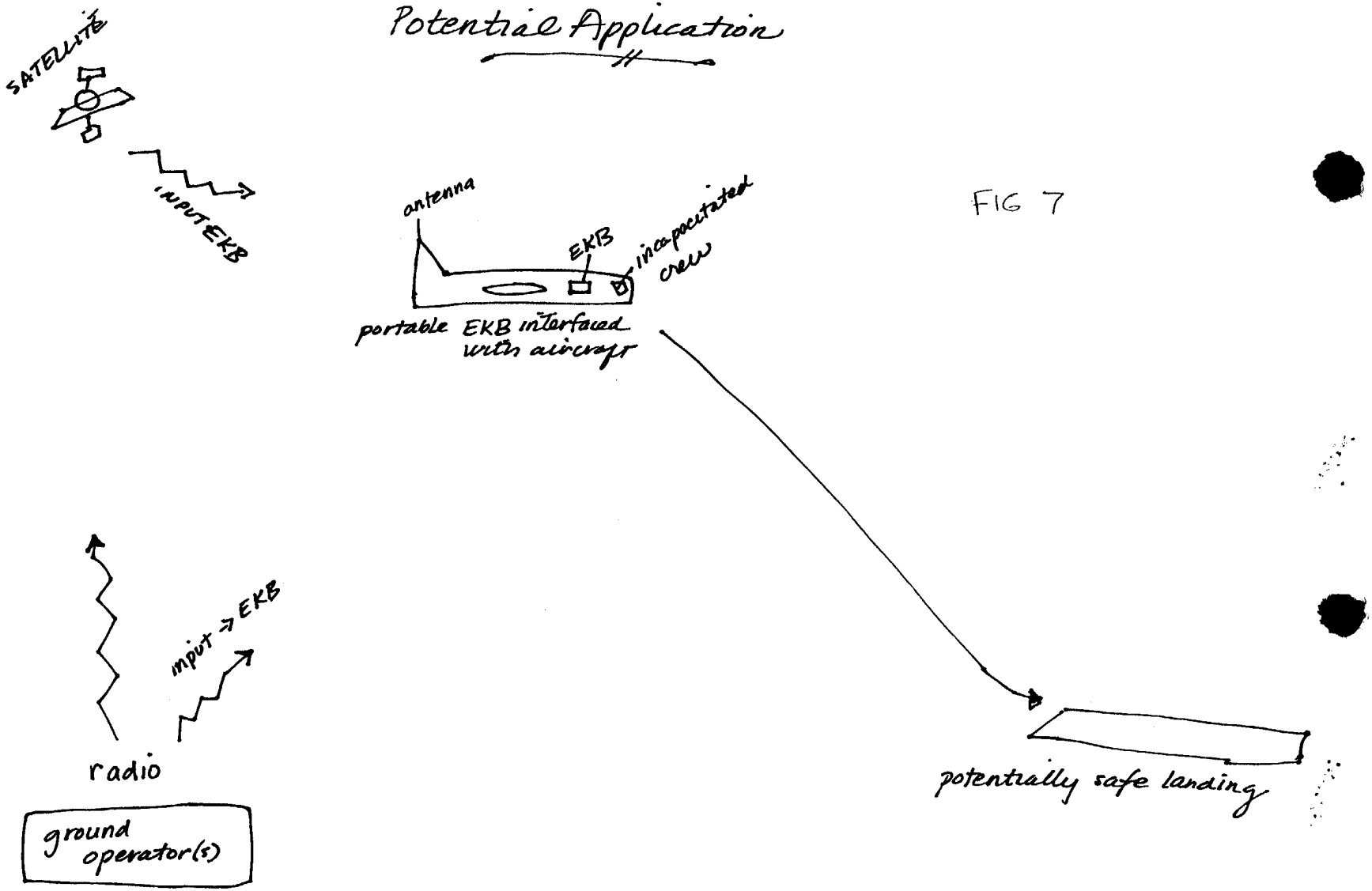

FIG 7

Please type a plus sign (+) inside this box → ☐

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DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

☐ Declaration Submitted with Initial Filing OR ☒ Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)

Attorney Docket Number	
First Named Inventor	
COMPLETE IF KNOWN	
Application Number	60/163836
Filing Date	NOV 5, 1999
Group Art Unit	
Examiner Name	

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

ELECTRONIC KIT BAG

(Title of the Invention)

the specification of which
☐ is attached hereto
OR
☒ was filed on (MM/DD/YYYY) NOV 5 1999 as United States Application Number or PCT International Application Number: _____ and was amended on (MM/DD/YYYY) _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES	NO
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

I hereby claim the benefit under 35 U.S.C. 119(e) of any United States provisional application(s) listed below

Application Number(s)	Filing Date (MM/DD/YYYY)	
60/163836	11/05/1999	☐ Additional provisional application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

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DECLARATION — Utility or Design Patent Application

I hereby claim the benefit under 35 U.S.C. 120 of any United States application(s), or 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT international application in the manner provided by the first paragraph of 35 U.S.C. 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application or PCT Parent Number	Parent Filing Date (MM/DD/YYYY)	Parent Patent Number (if applicable)

☐ Additional U.S. or PCT international application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

As a named inventor, I hereby appoint the following registered practitioner(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: ☐ Customer Number [ ] → Place Customer Number Bar Code Label here

OR

☐ Registered practitioner(s) name/registration number listed below

Name	Registration Number	Name	Registration Number

☐ Additional registered practitioner(s) named on supplemental Registered Practitioner Information sheet PTO/SB/02C attached hereto

Direct all correspondence to: ☐ Customer Number or Bar Code Label [ ] OR ☒ Correspondence address below

Name	ANGELA MASSON				
Address	PO BOX 190540				
Address	MIAMI BEACH				
City		State	FL	ZIP	33119
Country	USA	Telephone	305-531-5622	Fax	305-531-9177

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Name of Sole or First Inventor: ☐ A petition has been filed for this unsigned inventor

Given Name (first and middle [if any])	Family Name or Surname
ANGELA	MASSON

Inventor's Signature						Date	10/25/00
Residence: City	MIAMI BEACH	FL State		USA Country		Citizenship	USA
Post Office Address	PO BOX 190540						
Post Office Address							
City	MIAMI BEACH	State	FL	ZIP	33119	Country	USA

☐ Additional inventors are being named on the supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto

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STATEMENT CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) & 1.27(b))--INDEPENDENT INVENTOR	Docket Number (Optional)

Applicant, Patentee, or Identifier: ANGELA MASSON

Application or Patent No.: 60/163836

Filed or Issued: NOV 5 1999

Title: ELECTRONIC KIT BAG

As a below named inventor, I hereby state that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- ☐ the specification filed herewith with title as listed above.
- ☒ the application identified above.
- ☐ the patent identified above.

I have not assigned, granted, conveyed, or licensed, and am under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ No such person, concern, or organization exists.
- ☐ Each such person, concern, or organization is listed below.

Separate statements are required from each named person, concern, or organization having rights to the invention stating their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

ANGELA MASSON		
NAME OF INVENTOR	NAME OF INVENTOR	NAME OF INVENTOR
Signature of inventor	Signature of inventor	Signature of inventor
10/27/2000		
Date	Date	Date

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STATEMENT CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(f) & 1.27(b))--INDEPENDENT INVENTOR

Docket Number (Optional): 99270

Applicant, Patentee, or Identifier: Masson

Application or Patent No.: _____

Filed or Issued: _____

Title: Electronic Kit Bag

As a below named inventor, I hereby state that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- [X] the specification filed herewith with title as listed above.
- [ ] the application identified above.
- [ ] the patent identified above.

I have not assigned, granted, conveyed, or licensed, and am under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- [X] No such person, concern, or organization exists.
- [ ] Each such person, concern, or organization is listed below.

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Angela Masson		
NAME OF INVENTOR	NAME OF INVENTOR	NAME OF INVENTOR
Signature of inventor	Signature of inventor	Signature of inventor
1 Nov 1999		
Date	Date	Date

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